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IN THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application.

1. (currently amended) A method of implementing cable modem functions on a host computer comprising:

receiving information which may include cable modem data and cable modem commands at the cable modem;

transferring at least a portion of the information to the host computer;

performing functions corresponding to any transferred cable modem commands on the host computer into first results;

processing any transferred cable modem data on the host computer into second results;

translating the first results into hardware specific functions;

translating the second results into hardware specific data ~~formats~~;

executing the hardware specific functions; and

transferring the hardware specific data,

wherein the cable modem functions are performed in a firmware emulator that emulates cable modem firmware that performs the cable modem functions.

2. (original) The method of Claim 1, wherein the host computer includes a cable modem abstraction layer.

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3. (original) The method of Claim 2, wherein the translating is performed in by the abstraction layer.

4. (original) The method of Claim 2, wherein the abstraction layer is a DOCSIS abstraction layer.

5. (canceled)

6. (original) The method of Claim 1, wherein the modem functions performed on the host computer may be hardware independent.

7. (currently amended) A modem function processor comprising:
an abstraction layer which translates modem functions to and from hardware-specific functions; and
a firmware emulator that emulates cable modem firmware that performs the modem function and which performs hardware independent functions.

8. (original) The modem function processor Claim 7, wherein the abstraction layer sends or receives modem commands and/or data to or from a cable modem.

9. (original) The modem function processor Claim 7, wherein the abstraction layer

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is a DOCSIS abstraction layer.

10. (original) The modem function processor Claim 7, wherein the firmware emulator includes a plurality of state machines and states within the state machines.

11. (original) The modem function processor Claim 10, wherein the plurality of state machines performs the cable modem functions.

12. (original) The modem function processor Claim 7, further comprising an interface to a cable modem.

13. (original) The modem function processor Claim 12, wherein the interface may include one or more intermediate software driver interface layers, such as a transport driver interface.

14. (original) The modem function processor Claim 12, wherein the interface is a direct interface.

15. (currently amended) A method of performing modem functions comprising:
receiving the modem commands and/or data; and
distributing the modem commands and/or data among a plurality of state machines that

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perform respective state machine functions; and

processing the state machine functions by the plurality of state machines on a host computer.

16. (original) The method of Claim 15, wherein the conversion is performed by an abstraction layer which converts between hardware specific functions and hardware independent functions.

17. (original) The method of Claim 15, wherein the modem functions are cable modem functions.

18. (original) The method of Claim 15, wherein the processing uses resources of the host computer.